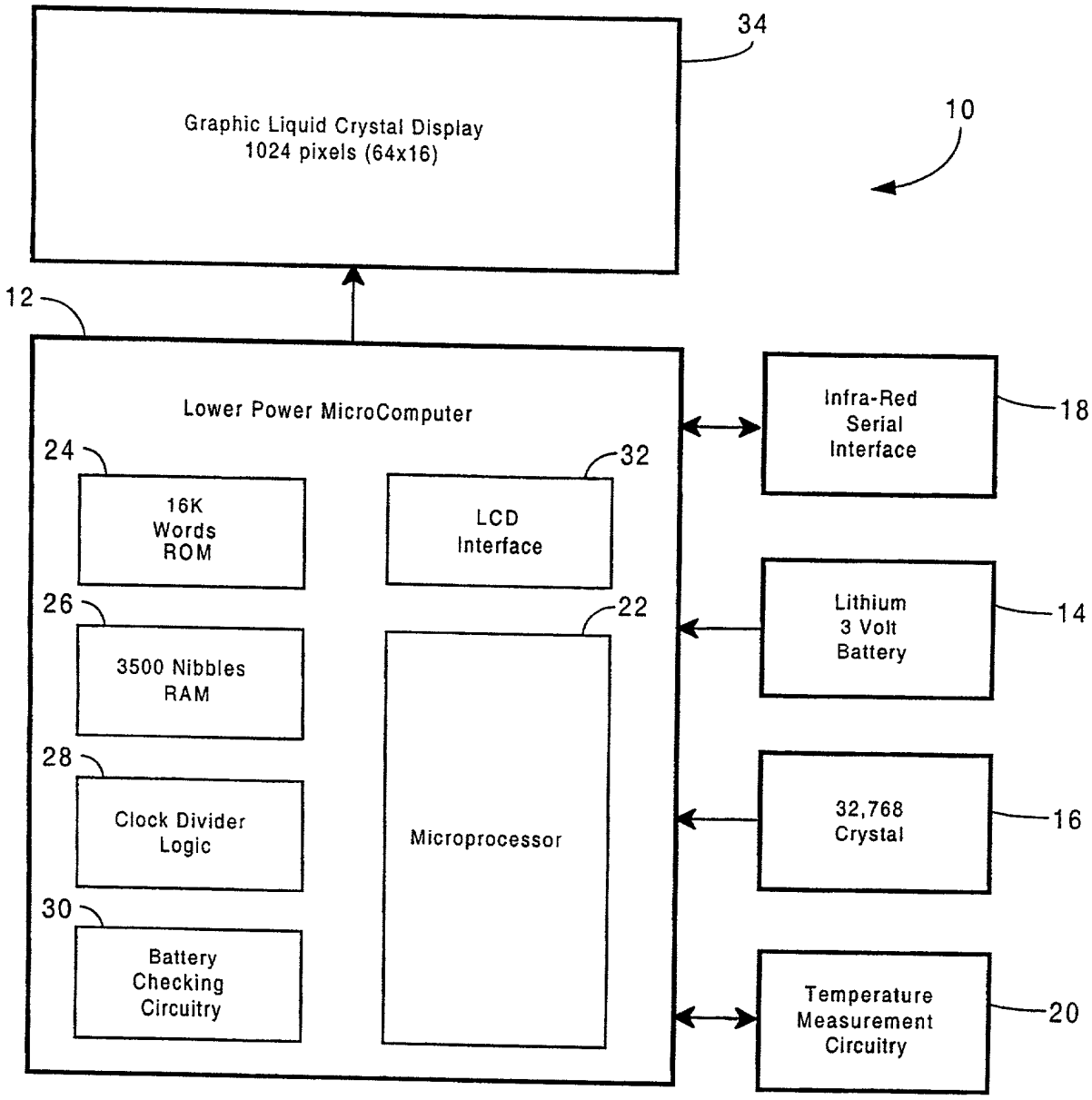

Graphic Liquid Crystal Display
1024 pixels (64x16)
34
10
12
Lower Power MicroComputer
24
16K
Words
ROM
26
3500 Nibbles
RAM
28
Clock Divider
Logic
30
Battery
Checking
Circuitry
32
LCD
Interface
22
Microprocessor
Infra-Red
Serial
Interface
18
Lithium
3 Volt
Battery
14
32,768
Crystal
16
Temperature
Measurement
Circuitry
20

FIG. 1

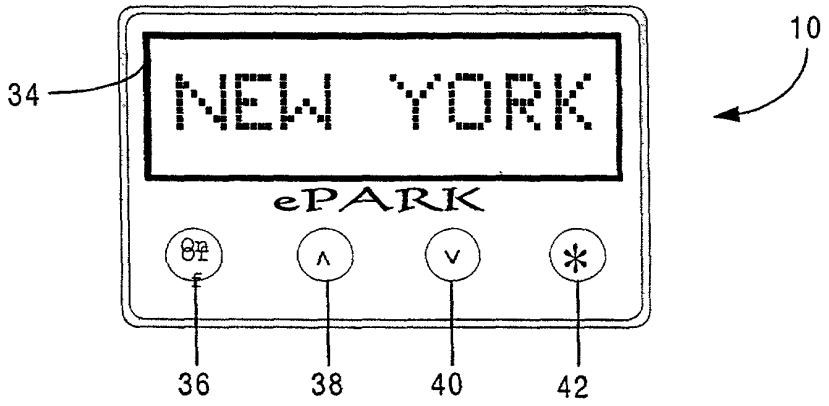

NEW YORK
ePARK
On
Off
34
10
36
38
40
42

FIG. 2

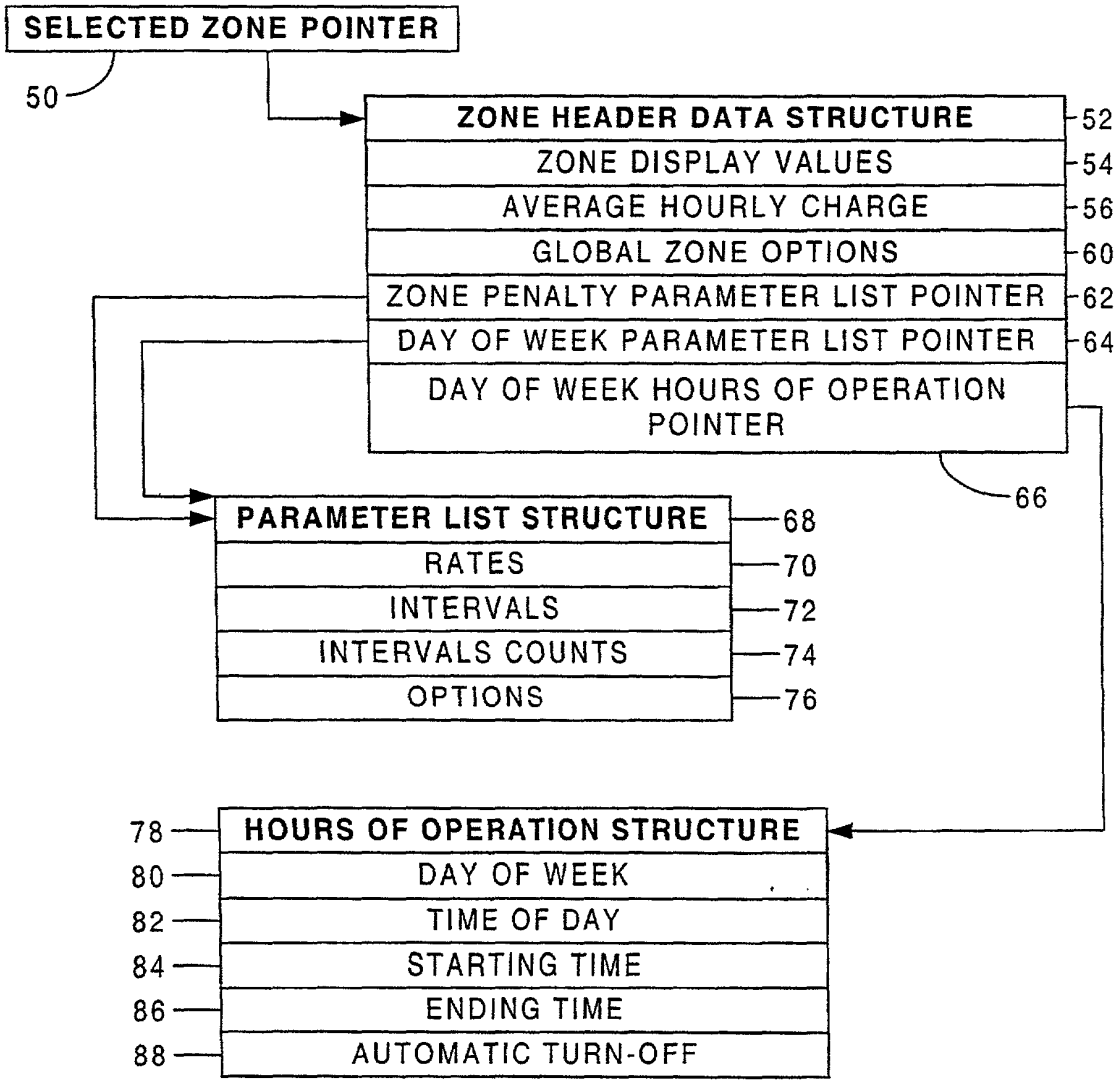

SELECTED ZONE POINTER
50
ZONE HEADER DATA STRUCTURE
ZONE DISPLAY VALUES
AVERAGE HOURLY CHARGE
GLOBAL ZONE OPTIONS
ZONE PENALTY PARAMETER LIST POINTER
DAY OF WEEK PARAMETER LIST POINTER
DAY OF WEEK HOURS OF OPERATION POINTER
52
54
56
60
62
64
66
PARAMETER LIST STRUCTURE
RATES
INTERVALS
INTERVALS COUNTS
OPTIONS
68
70
72
74
76
78
HOURS OF OPERATION STRUCTURE
80
DAY OF WEEK
82
TIME OF DAY
84
STARTING TIME
86
ENDING TIME
88
AUTOMATIC TURN-OFF

FIG. 3

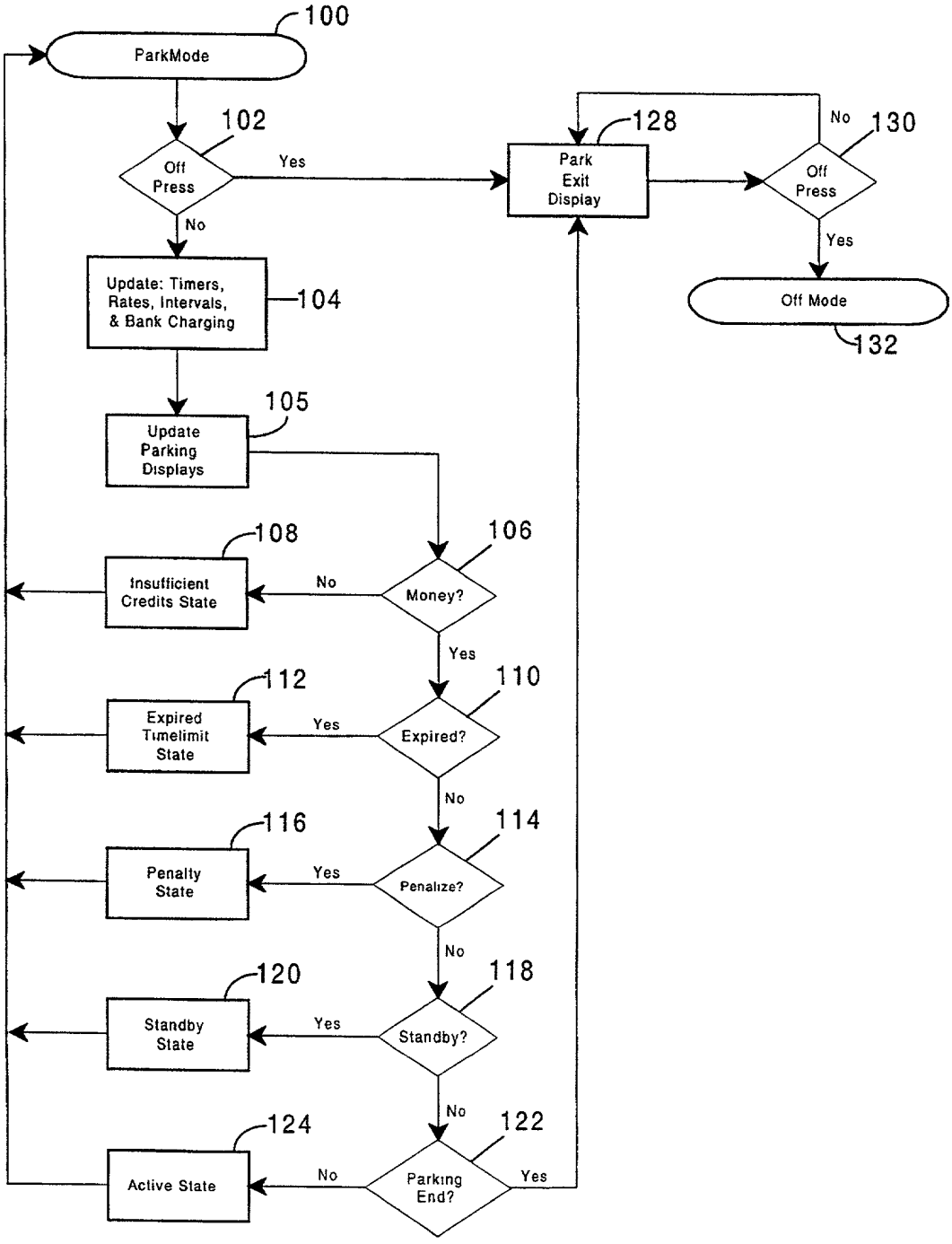

100
ParkMode
102
Off Press
Yes
No
Update: Timers, Rates, Intervals, & Bank Charging
104
105
Update Parking Displays
106
Money?
No
108
Insufficient Credits State
Yes
110
Expired?
Yes
112
Expired Timelimit State
No
114
Penalize?
Yes
116
Penalty State
No
118
Standby?
Yes
120
Standby State
No
122
Parking End?
Yes
124
Active State
No
128
Park Exit Display
No
130
Off Press
Yes
Off Mode
132

FIG. 4

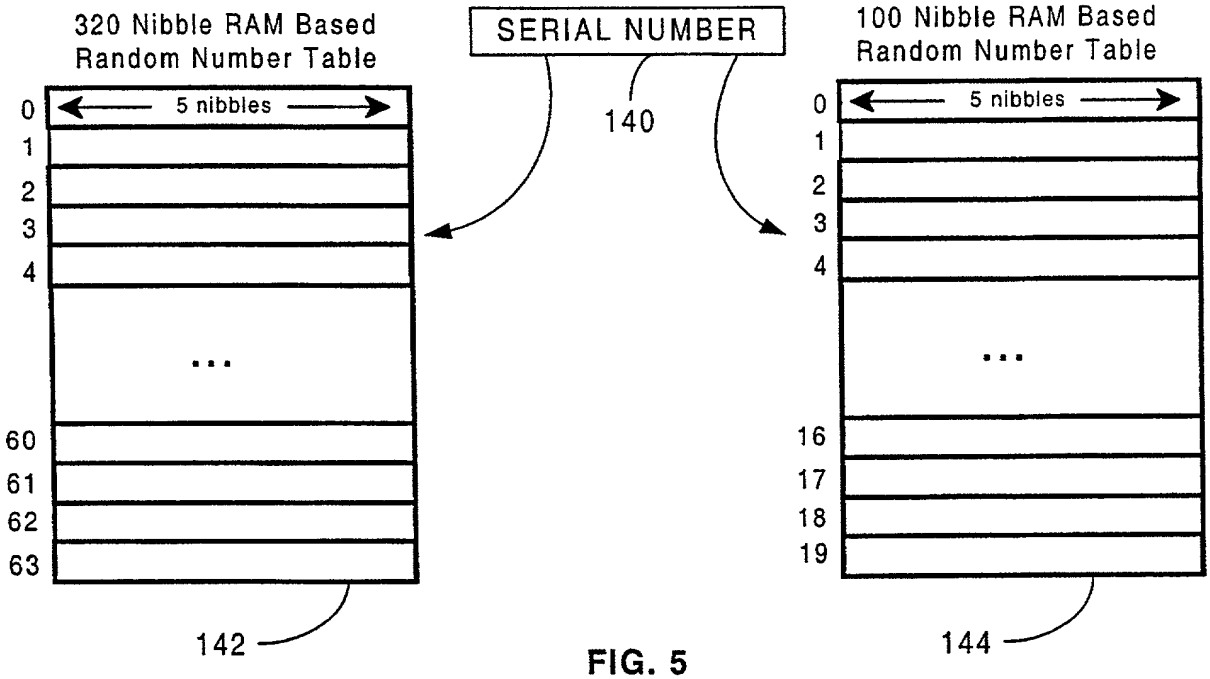

320 Nibble RAM Based
Random Number Table
SERIAL NUMBER
140
100 Nibble RAM Based
Random Number Table
5 nibbles
0
1
2
3
4
...
60
61
62
63
142
5 nibbles
0
1
2
3
4
...
16
17
18
19
144

FIG. 5

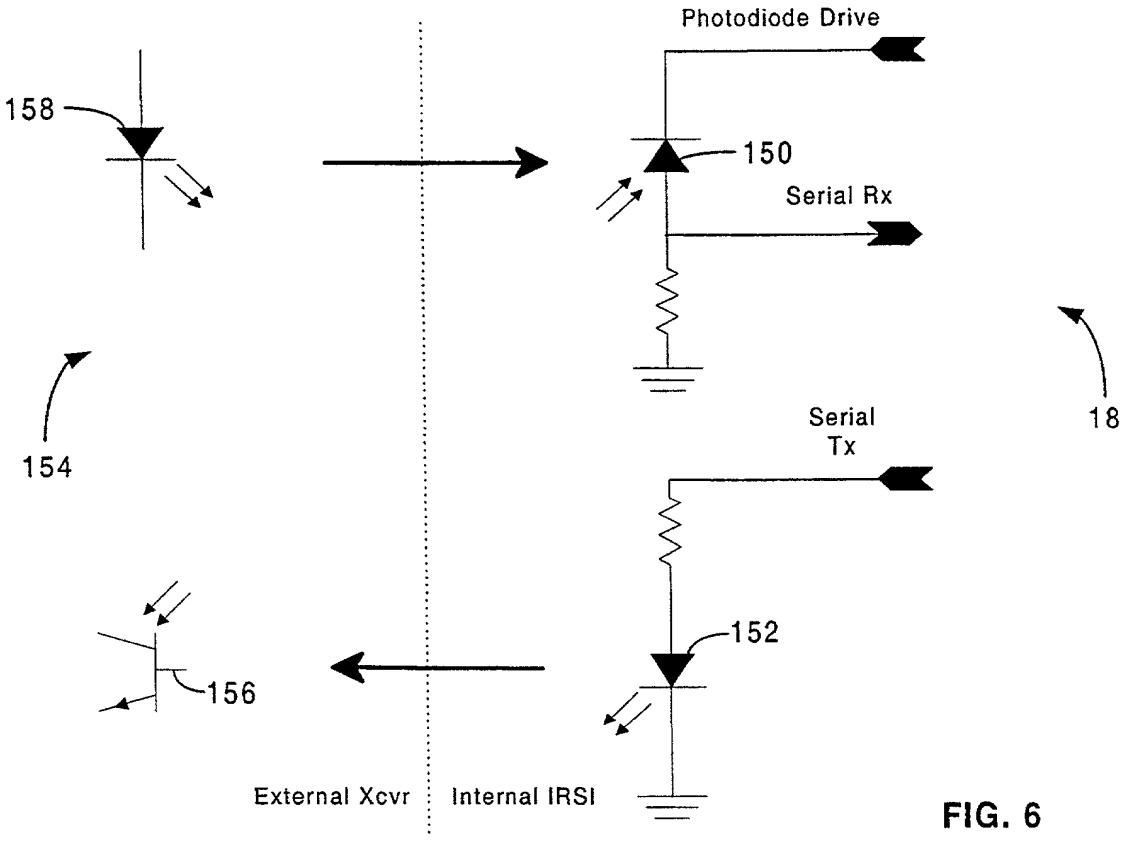

Photodiode Drive
158
150
Serial Rx
154
18
Serial
Tx
152
156
External Xcvr
Internal IRSI

FIG. 6

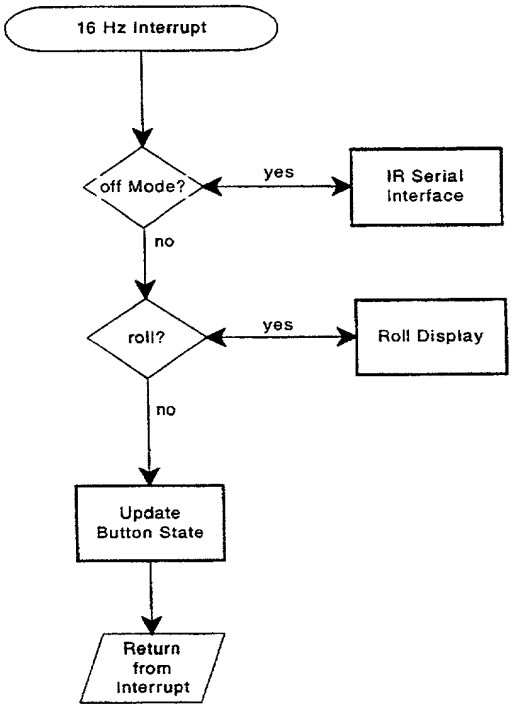


FIG. 7

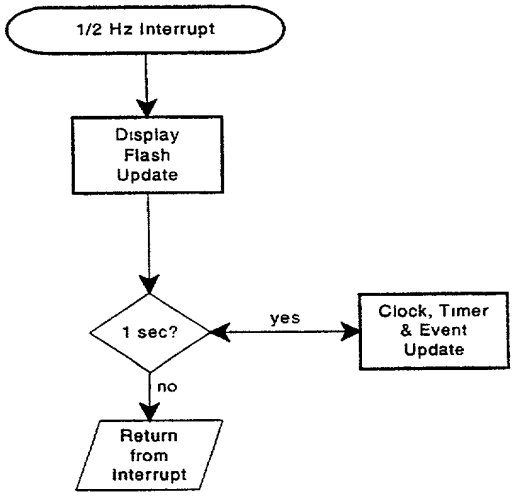
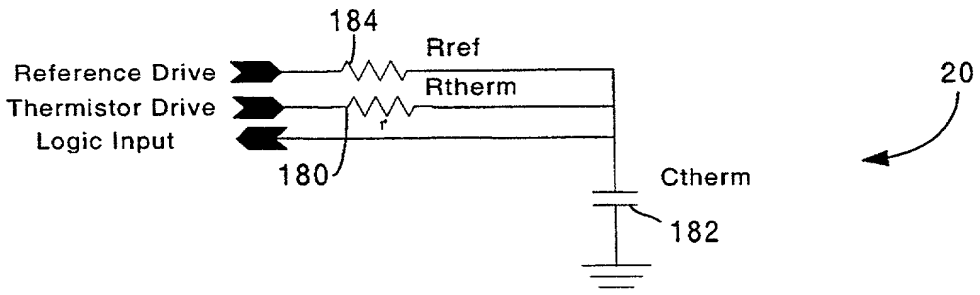


FIG. 9



where,
T1 is the time for Ctherm to charge from 0 to a logic high thru the reference resistor Rref
T2 is the time for Ctherm to charge from 0 to a logic high thru the thermistor Rtherm

Rtherm = (T2/T1) * Rref

Temperature = table lookup(Rtherm)

FIG. 8

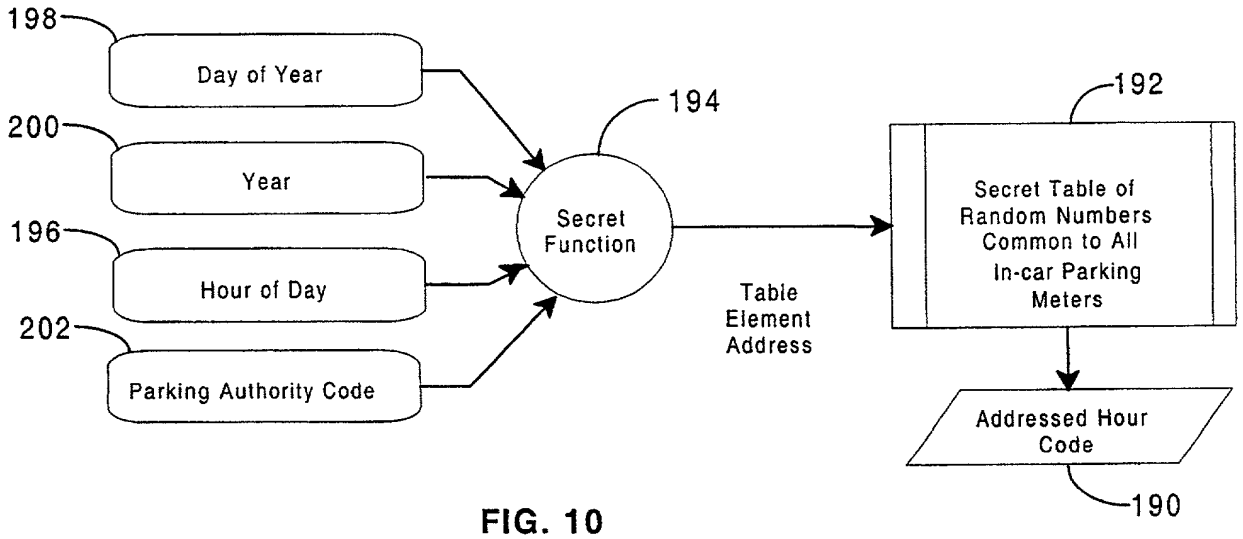


FIG. 10

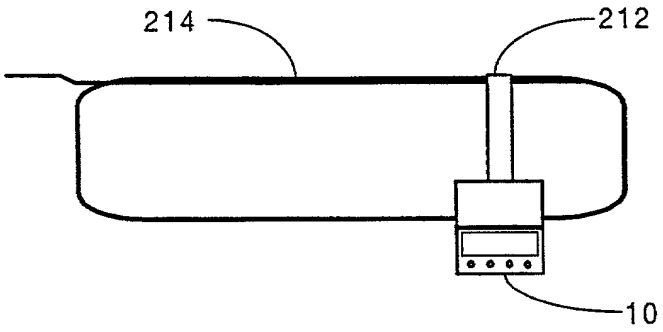


FIG. 11A

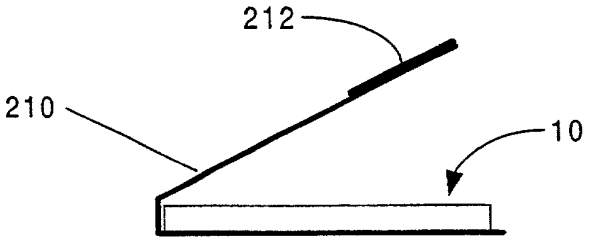


FIG. 11B

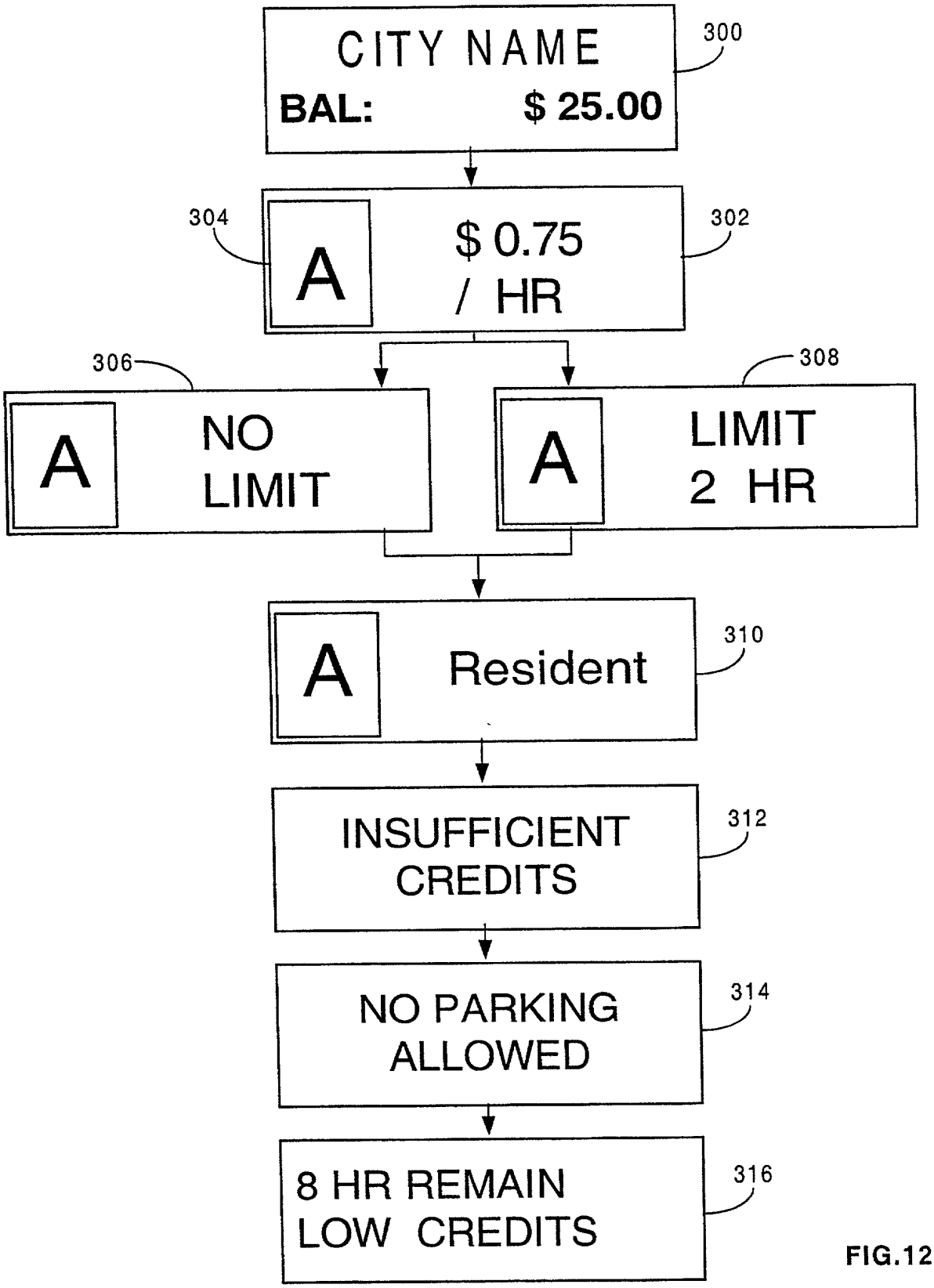

CITY NAME
BAL: $ 25.00
300
304
A
$ 0.75
/ HR
302
306
A
NO
LIMIT
308
A
LIMIT
2 HR
A
Resident
310
INSUFFICIENT
CREDITS
312
NO PARKING
ALLOWED
314
8 HR REMAIN
LOW CREDITS
316

FIG.12

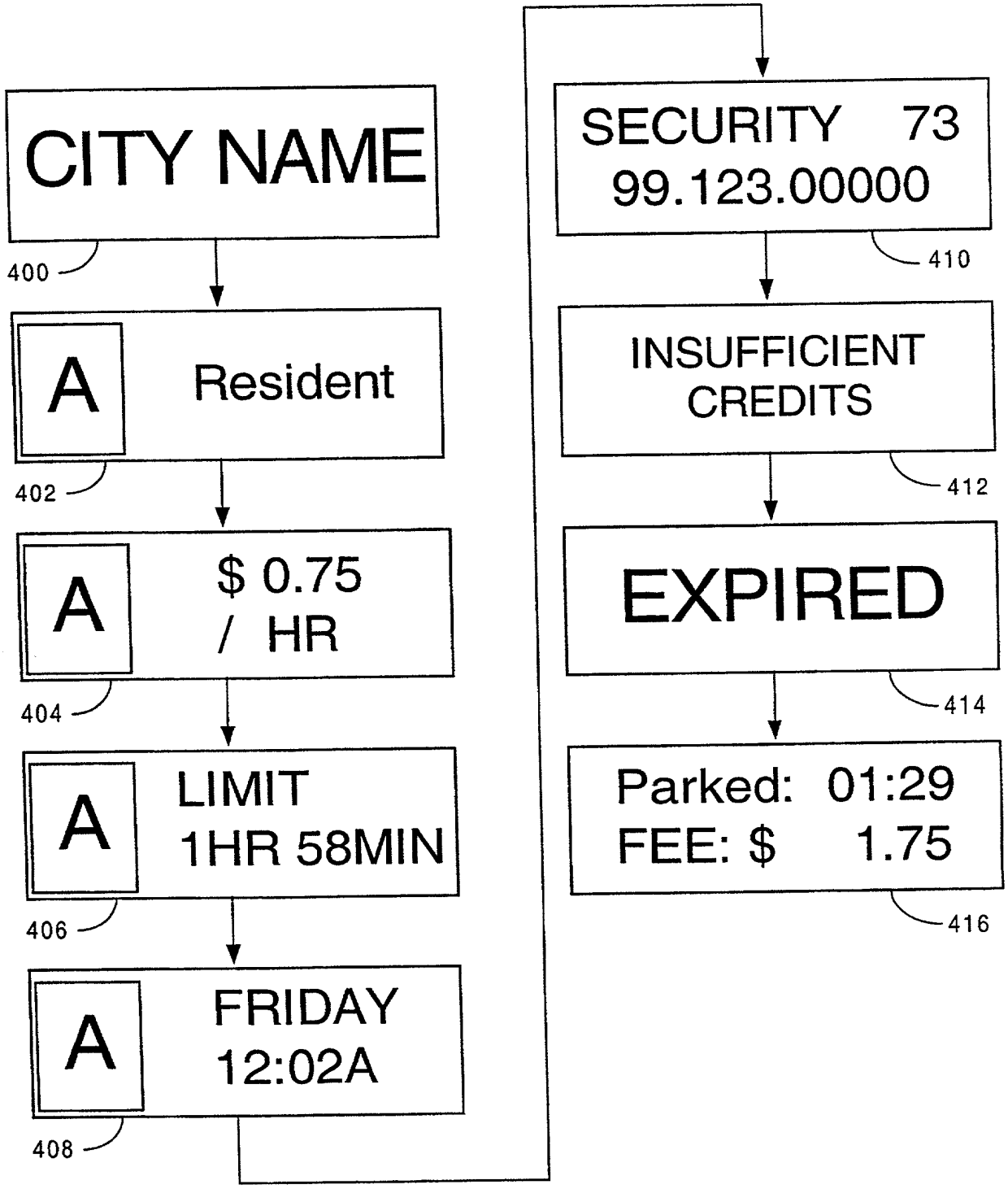

CITY NAME
400
A Resident
402
A $ 0.75 / HR
404
A LIMIT 1HR 58MIN
406
A FRIDAY 12:02A
408
SECURITY 73 99.123.00000
410
INSUFFICIENT CREDITS
412
EXPIRED
414
Parked: 01:29 FEE: $ 1.75
416

FIG. 13